

PERBANDINGAN KEMAMPUAN PEMECAHAN MASALAH DAN KOMUNIKASI MATEMATIS ANTARA SISWA YANG MEMPEROLEH PEMBELAJARAN DENGAN *PROBLEM BASED LEARNING* (PBL) DAN *SITUATION BASED LEARNING* (SBL)

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ABSTRAK

Penelitian ini bertujuan untuk menganalisa pencapaian kemampuan pemecahan masalah matematis dan peningkatan kemampuan komunikasi matematis antara siswa yang memperoleh pembelajaran dengan *PBL* dan *SBL* ditinjau berdasarkan model pembelajaran dan Kemampuan Awal Matematis (KAM) di kedua kelas tersebut. Metode penelitian yang digunakan adalah kuasi eksperimen dengan *pretest posttest two treatment design*. Populasinya yaitu seluruh siswa SMP kelas IX di salah satu SMP Negeri di Kota Bogor. Adapun sampelnya terdiri dari 31 siswa di kelas *PBL* dan 31 siswa di kelas *SBL*. Hasil penelitian menunjukkan bahwa pencapaian kemampuan pemecahan masalah siswa di kedua kelas tersebut tidak memiliki perbedaan yang signifikan jika dilihat secara keseluruhan siswa. Tetapi, apabila ditinjau berdasarkan masing-masing level KAM (tinggi, sedang, rendah) siswa dari kedua kelas eksperimen, diperoleh bahwa terdapat perbedaan yang signifikan antara pencapaian kemampuan pemecahan masalah pada siswa yang berkemampuan sedang saja, dimana pencapaian di kelas *PBL* lebih baik daripada pencapaian di kelas *SBL*. Sedangkan untuk kelompok siswa dengan level KAM tinggi dan rendah, hasil penelitian menunjukkan bahwa tidak ada perbedaan rata-rata pencapaian kemampuan pemecahan masalah matematis antara siswa yang memperoleh pembelajaran menggunakan *PBL* dan *SBL*. Selain itu hasil penelitian menunjukkan bahwa terdapat efek interaksi antara model pembelajaran dan level KAM terhadap pencapaian kemampuan pemecahan masalah matematis siswa. Dalam hal peningkatan kemampuan komunikasi matematis, hasil penelitian menunjukkan bahwa peningkatan kemampuan komunikasi matematis siswa di kelas *SBL* lebih baik daripada siswa di kelas *PBL*. Selanjutnya, apabila ditinjau berdasarkan masing-masing level KAM (tinggi, sedang, rendah) siswa dari kedua kelas eksperimen, diperoleh bahwa pada kelompok siswa dengan level KAM sedang dan rendah, peningkatan KKM siswa di kelas *SBL* lebih baik daripada siswa di kelas *PBL*. Sedangkan pada siswa dengan level KAM tinggi menunjukkan bahwa tidak terdapat perbedaan peningkatan KKM antara siswa di kelas *PBL* dan *SBL*. Selain itu hasil penelitian menunjukkan bahwa terdapat efek interaksi antara model pembelajaran dan level KAM terhadap peningkatan kemampuan komunikasi matematis siswa.

Kata kunci: *Problem Based Learning (PBL)*, *Situation Based Learning (SBL)*, Kemampuan Pemecahan Masalah Matematis, Kemampuan Komunikasi Matematis

**COMPARISON MATHEMATICAL PROBLEM SOLVING AND
COMMUNICATION ABILITY BETWEEN THE STUDENTS WHO
STUDIED THROUGH *PROBLEM BASED LEARNING (PBL)* AND
*SITUATION BASED LEARNING (SBL)***

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ABSTRACT

This study aims to analyze the achievement of mathematical problem solving ability and the enhancement of mathematical communication ability between students acquire learning with PBL and SBL according to learning model and Early Mathematical Ability (KAM) in both classes. Researcher used quasi-experimental method with pretest posttest two treatment design. The population is all junior high school students of class IX in one of the Junior High School in Bogor. The sample consisted of 31 students in PBL class and 31 students in the SBL class. The results showed that the achievement of students in problem-solving abilities of both classes were not significantly different when viewed as a whole students. But, when viewed according to each KAM's level (high, medium, low) students of both classes of experiments, found that there are significant differences between the achievement of problem-solving ability in students with medium levels, with the achievement in the class PBL better than achievement class SBL. For the group of students with high and low levels of KAM, the results showed that there was no difference in the average achievement of mathematical problem solving ability among students who obtained using PBL learning and SBL. Also, results of research showed that there is interaction effects between learning model and the levels of KAM towards the achievement of students' mathematical problem solving ability. In terms of improving the ability of mathematical communication, the results showed that the enhancement of students' mathematical communication ability in grades SBL better than students in the classroom PBL. Furthermore, when viewed on their respective KAM level (high, medium, low) students of both classes of experiments, found that the group of students with moderate and low levels of human responsibilities, increased KKM students in grades SBL better than students in the classroom PBL. While at students with a high level of KAM indicate that there is no difference between the increase in students in the class KKM PBL and SBL. Also, results showed that there is interaction effects between learning model and the level of KAM towards the enhancemet students' mathematical communication ability.

Key Word: *Problem Based Learning (PBL)*, *Situation Based Learnig (SBL)*, Mathematical Problem Solving Ability, Matheatical Communication Ability